

EMERGENCY LIGHT

Safe solutions



Experience and know-how

For more than two generations Glamox has developed, produced and distributed lighting solutions for the professional market. Emergency lighting has to comply with strict regulations for both products and projecting. Glamox takes its responsibility seriously and offers emergency lighting that meets all the different requirements for Europe.

In critical situations, emergency equipment that works perfectly can mean the difference between life and death. Glamox has developed a range of emergency products that secure the best escape route lighting in addition to good design and performance.

Glamox can offer you a unique range of products, both in terms of different design, different types of application and also for different type of systems. A freedom of choice whether you choose decentralised with selftest, addressable units or centralised battery.

Great care has been taken to ensure that illustrations and technical specifications in this brochure are correct at time of publication.

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Emergency light planning



Planning your emergency lighting installation does not have to be confusing. Whilst it can be easy to miss out important areas or locations in your premises, please use this emergency lighting overview to direct you in what to look out for and what needs to be addressed.

The benefits with planning emergency lighting solutions with Glamox are that we are working with standardised systems and high quality products that are here today – and tomorrow.



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Projecting step by step



Locate fire cells and escape routes on drawings

Locate essential areas in the project

- Change of direction
- Change of floor levels
- Staircase
- Rooms without windows
- Fire technical equipment

Decide type of system and product

- Centralised
- Stand-alone
- Integrated
- Self-test
- Addressable

Example of fire technical drawing





Plan and project
escape route lighting

1 lux on centreline.
Uniformity better than 40:1



Locate, plan and project
high risk areas

10% of light level - minimum 1.5 lux.
Uniformity better than 10:1



Locate, plan and project
anti-panic areas

0.5 lux in area.
Uniformity better than 40:1



Areas to be covered

Planning emergency lights in your projects is not just about showing users the escape route. Lights must be carefully located to provide sufficient illumination according to the different areas of premises and must conform to the latest legislation. An emergency escape lighting system should normally cover the following areas:



Exit doors and escape routes



High risk areas



Change of direction



Stairways so that each flight receives adequate light



Changes in floor level



Intersections of corridors



Fire fighting equipment



Final exit door and outside building



Anti-panic areas

Each area has their own requirements and needs to be looked at individually.



Escape route lighting

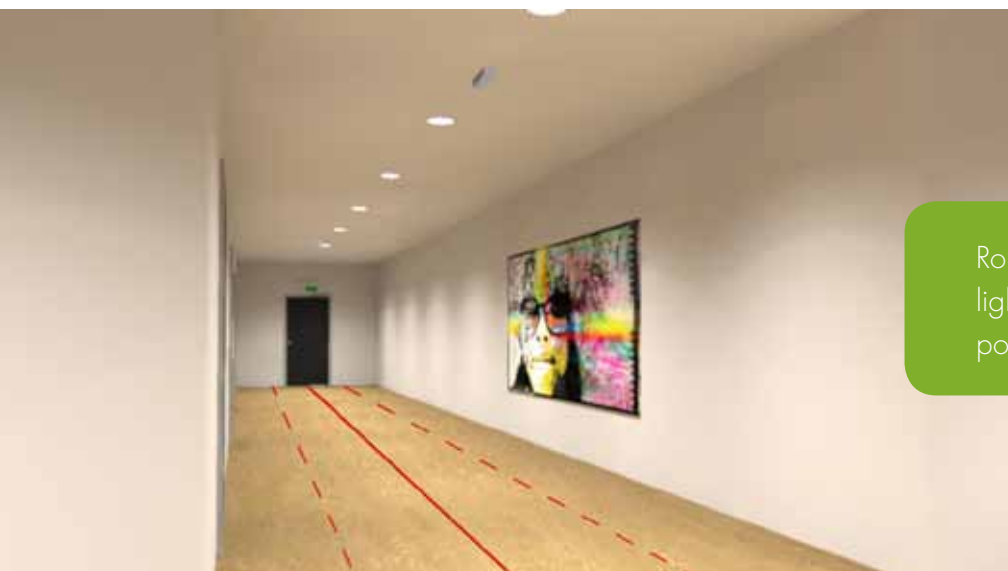
Escape route lighting has a superior objective to contribute to a safe evacuation from an area when normal illumination fails. That part of the building, which is prepared for evacuation, should be easily identified and used with great safety. Luminaires prepared for escape route lighting are divided into route lighting and sign lighting.

Route lighting

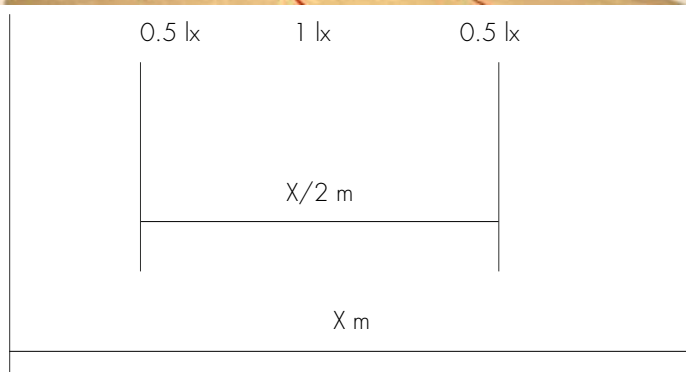
Route lighting should provide ample lighting to make an evacuation possible in a safe way. For escape routes up to 2 m widths the horizontal illumination on the floor should not be less than 1 lux on the centre line of the escape route and outside the centre line the illumination should be minimum 50% of the lowest level of the centre line. The ratio between maximum to minimum illumination level should not exceed 40:1.

Regulation recommends the provision of a horizontal illumination at floor level on the centre line of a defined escape route (permanently unobstructed) not less than 1 lux. For escape routes of up to 2m wide, 50% of the route width should be lit to a minimum of 0.5 lux. For anti-panic areas a minimum level of 0.5 lux is required excluding a 0.5m border to the perimeter of the area.

Wider escape routes can be treated as a number of 2m wide bands. The actual degree of illumination should be closely related to the nature of both the premises and its occupants with special consideration being given to old person's homes, hospitals, crowded areas such as pubs, discos and supermarkets, and to whether or not the premises are residential.



Route lighting should provide ample lighting to make an evacuation possible in a safe way.



Emergency escape signs

Exit direction signs should mark changes in direction of emergency exit escape routes where it is not possible to spot the emergency exit. Signs directing escape routes should be illuminated or externally illuminated.

Sign height "H" should consider the reading distance and be dimensioned according to the following formula:

- For internally illuminated signs:
Max reading distance = $200 \times H$
- For externally illuminated signs:
Max reading distance = $100 \times H$

Along with route lighting the escape signs shall lead the users to safety.



Glamox E80 is designed for a maximum reading distance of 30m

Escape route lighting

CORRIDORS AND INTERSECTIONS OF CORRIDORS

In a building it is important to have emergency lighting that clearly illuminates the escape routes and where there are changes in direction. This allows users to clearly identify their means of escape and should highlight the escape route signs.



Possible solution

X	X/2
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E85 C: X = 17m



Suitable products

We offer a range of products that are ideal for covering changes in corridors, junctions and changes in directions. Please check details on E80, E85 C.



E80



E85 C
X = 17m

Escape route lighting

CHANGES IN FLOOR LEVELS

Uneven flooring on escape routes needs to be illuminated so that in emergency users can act accordingly. In areas where flooring may become uneven on an escape route, a lighting unit should be fitted, so that it does not prove a danger to users. Uneven flooring can consist of single steps, ramps, sloping floors etc.



Uneven flooring on escape routes need to be illuminated so it's not a danger to users.

Possible solution

X

X/2

E85 C: X = 17m



Suitable products

We offer a range of products that are ideal for covering changes in floor level.

Please check details on E85 C.



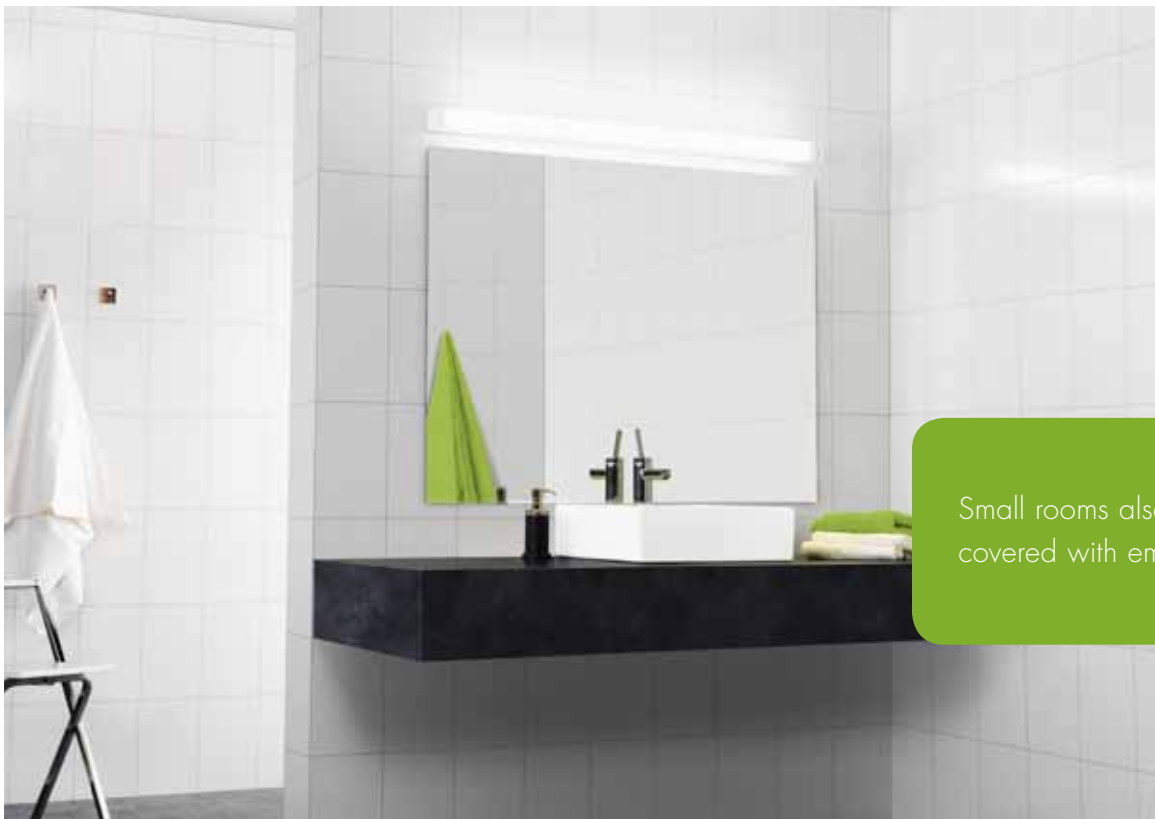
E85 C

X = 17m

Escape route lighting

WINDOWLESS ROOMS

All areas of a building need to be covered in case of evacuation, including toilet accommodation and other windowless rooms. When an evacuation is needed and users must make their way out of the building safely, it is necessary that all escape routes are visible. Small rooms are no exception to this rule, they need to be well lit so that users can find their way to safety.



Small rooms also need to be covered with emergency lighting.

Suitable products

We offer a range of products that are ideal for windowless and small rooms.

Please check details on E80, E85 WB, GEF.



E80

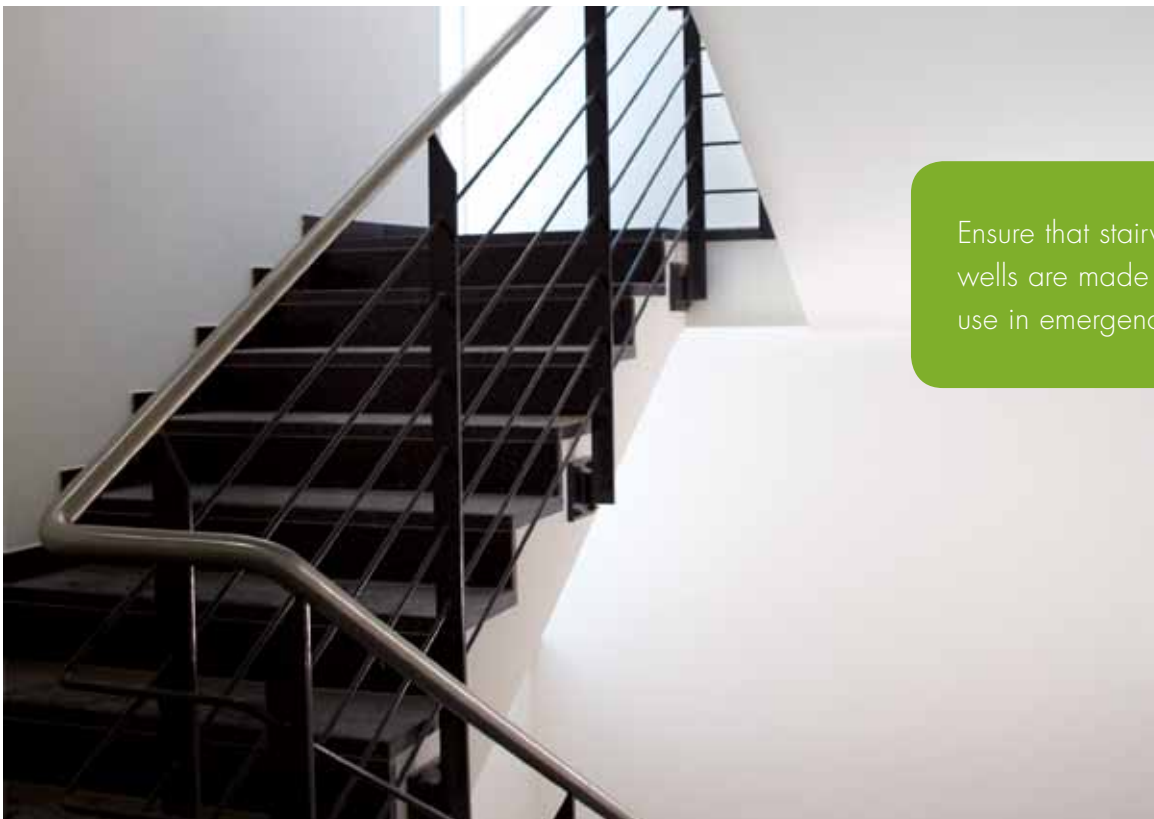


E85 C



GEF
when IP rating is required

Stairways and stairwells can present a potential hazard in an emergency. Emergency lights need to be fitted so that these challenging areas are made visible and safe to use.



Ensure that stairways and stairwells are made visible and safe to use in emergency situations.

Suitable products

We offer a range of products that are ideal for covering stairways and stairwells. Please check details on E80, E85, A10.



E80



E85 C



A10
for integrated solution

Escape route lighting

DOORS AND EXITS

Ensuring that exit doors are well lit in an emergency can be the difference between evacuating a building and getting trapped inside. All exit doors need to be well lit to ensure that users can identify where to go at the end of escape routes.



Possible solution



Suitable products

We offer a range of products that are ideal for covering exit doors.

Please check details on E80, GEF, GF12.



E80



GEF
when IP rating is required



GF12
for large areas

In areas where high-risk operations are carried out, special requirements for emergency lighting prevail. For high-risk areas the emergency lighting should not be less than 10% of standard lighting and minimum 15 lux. The ratio between maximum and minimum illumination level should not exceed 10:1. Areas with heavy machinery and physical risk need to be kept well lit to allow the safe shutdown of machinery to avoid injury



High-risk areas require special emergency lighting.

Possible solution



Suitable products

We offer a range of products that are ideal for high-risk areas.

Please check details on GEF, MIR, MAX.



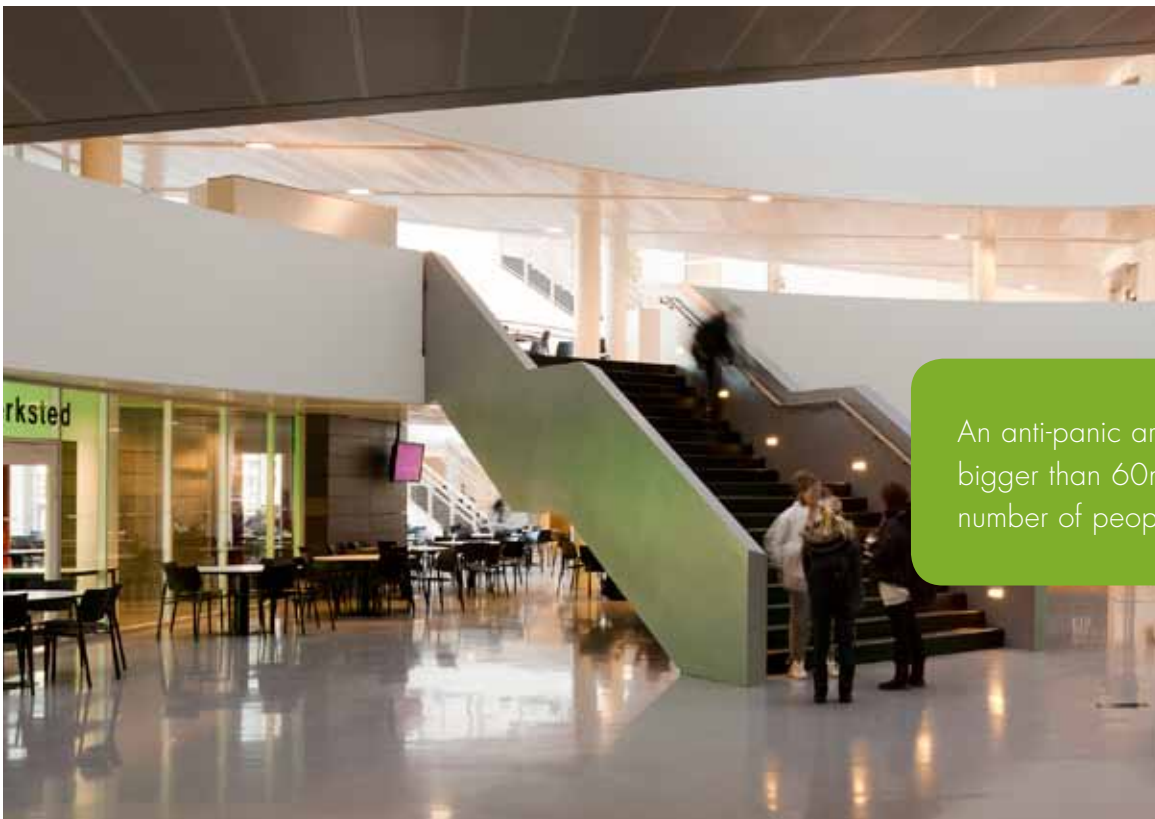
MIR/MAX
for integrated solution



GEF
when IP rating is required

Anti-panic lighting

An anti-panic area is defined as an area bigger than 60 m² where a large number of persons are gathered. The illumination of this area should provide sufficient emergency lighting, not to raise panic and enable persons to arrive at a place where the escape route can be identified. For anti-panic areas the horizontal illumination on the floor should not be less than 0.5 lux, and the ratio between maximum and minimum illumination level should not exceed 40:1.



An anti-panic area is an area bigger than 60m² where a large number of people are gathered

Suitable products

We offer a range of products that are ideal for covering large open areas. Please check details on E85 WB, GEF, integrated solutions.



E85 WB



GEF
when IP rating is required



C20
for integrated solution



Standards for emergency light

Specifying emergency light can very often be like stumbling through a minefield of different National and European standards. The installation of emergency luminaires and fire exit signs in premises must meet several legislations and also be agreeable with the business owner. The current requirements of legislation must then be met:

NATIONAL / EUROPEAN STANDARDS

EN 1838:2012 / IS3217

Emergency light includes light technical conditions like reading distance, uniformity and level of light.

EN 50171:2001 CENTRAL POWER SUPPLY SYSTEMS

Central power supply systems is a system standard that includes design, operation and maintenance of a central based emergency power supply. This is then referring to product standards for UPS and emergency luminaires.

EN 50172:2004 / IS3217 EMERGENCY LIGHT SYSTEMS

System standard for emergency light. This is a system standard that includes design, operation and maintenance of an emergency light system. This is then referring to product standards for Emergency luminaires and stationary batteries.

EN 60598-2-22:1999 (EMERGENCY LUMINAIRES) + EN 50091-1-1 (UPS)

Product standards for emergency luminaires and Uninterruptible Power Systems (UPS).

The Health and Safety (Safety Signs and Signals) Regulations 1996 state that final exits and locations where the escape route may be unclear must have signs installed to reduce uncertainty

Local Authorities and Fire Prevention Officers will have preferences as to the requirements of signage and lighting, so seeking their views is always advisable



Servicing and testing

To test an emergency lighting system you need to simulate a mains power failure on the normal lighting circuit or circuits of individual luminaires. This will force the emergency lighting system to operate and use the battery supply. This can be done manually or automatically.

MAINTENANCE INSTRUCTIONS FOR EMERGENCY LUMINAIRES

- The batteries are described as consumables and are not covered by our 5 year warranty.
- The battery should be replaced with same item number. The item number is found on the label of the old battery. If this is unreadable you must use the entire luminaire description. The item number of the new battery shall be part of the operation and maintenance documentation.
- It is not necessary to disconnect the mains supply prior to changing the battery. It is recommended to disconnect the mains supply to self-test variants, as this will reset the test cycle and a battery discharge test will be done 48 hours after battery change.
- For emergency lighting that use fluorescent or compact fluorescent lamps as light sources in both emergency and in normal lighting operation, the emergency lighting will wear extra on the lamp. We therefore recommend, for safety reasons, to make group replacement of these lamps twice as frequent as for the rest of the lighting system. If there are light sources that don't light up during the emergency operation, it must be replaced immediately.
- Emergency luminaires must be tested and the results / actions must be logged and kept in accordance with the national building regulations. These refer to EN 50172, which states:
 1. Functional test at least once per month.
 2. Full Capacity test at least once a year. For safety reasons we recommend to fully discharge the battery every 3 month as a test to see if it's still functional.
 3. The following should be recorded:
 - a. Date of commissioning of the system
 - b. Date of tests
 - c. Date and comments to service of the facility
 - d. Date of errors that occur at the facility and what actions must be implemented
 - e. The date when the measures are implemented and test status measured
- Self Tests are tested according to EN 50172. If errors occur, the bipolar diode or a set of LEDs will indicate what type of error it is. The light patterns of the various errors are found in the user manual, which is a part of the operation and maintenance documentation.

RESPONSIBILITY AND CONTROL, EMERGENCY EQUIPMENT

Emergency lighting has an important function in any building. The operational and maintenance costs of emergency equipment are high. The investment costs often account for 5-10% of the total costs for emergency lighting equipment.

When analysing operational and maintenance costs, the following should be taken into account:

- The equipment's energy requirements
- Monthly testing and control of the fittings and light sources
- Annual testing and control of emergency power sources
- Materials and parts
- Work connected to maintenance
- Operational and maintenance documentation. Log keeping.



Alternative solutions

INTEGRATED EMERGENCY LIGHTING

Designation: E1/(1 hour lighting time) or E3/(3 hours lighting time) Standard light luminaires where one of the light tubes also provides light in emergency operation. The solution has battery, diode and emergency lighting electronics built into the luminaire housing. Supplied as combined maintained M/non-maintained NM.

INTEGRATED LED EMERGENCY LIGHTING

Luminaire designation = E1L/ or E3L/ Standard luminaire with its own integrated LED light source for emergency use. The solution has battery, diode and emergency lighting electronics built into the luminaire body. The light source is dedicated to emergency lighting. Supplied as non-maintained NM.

STAND-ALONE

Designation = E1/, E3/ or Z (centralised) The luminaire is dedicated to emergency lighting. Comes as both sign or escape route lighting. Some versions supplied as combination (with applied sign). The combined solution is also supplied as combined maintained M/Non-maintained NM. Escape route light supplied as Non-Maintained (NM) and sign lights supplied as Maintained (M). Stand-Alone solution available for various types of light source.

Often emergency lighting is looked at as a necessary evil when it comes to aesthetics. Glamox can today offer a complete range of route light and anti-panic light with LED based design that can be integrated into most of our commercial luminaires. To integrate emergency light into the general lighting is often the only way to meet the aesthetic demands in a modern building.

The advantages of using the LED technology for route light and anti-panic light is that a dedicated light source for emergency gives a higher degree of safety and additionally you require less battery capacity and therefore lower battery cost.

Glamox can also offer the more standard integrated emergency version when the room requires more light (example large ceiling heights). All our solutions can be offered in a Standard (S), Self Test (ST) and an addressable (DALI) version based on DALI protocol. Our aim is to offer a complete solution where low maintenance cost and high safety is the main objective. By using quick connectors between the battery and electronics and the LED and electronics the time spent on both mounting and maintenance is lowered to a minimum.

Our reflector technology on LED gives a coverage area of up to 44 m² according to anti-panic light regulations.

MANUAL TEST (S)

In this case the power supply is manually cut to emergency light luminaires. During monthly function tests, the length of the test is a maximum of 25% of the expected lighting time. During annual tests the equipment should undergo a full discharge test to check battery capacity.

Test status is found by visual checking of the charge diode and the light source at the same time that testing takes place. Tests and repairs should be logged with their status.

SELF-TEST (ST)

Emergency light luminaires take control of the tests themselves and carry these out at the necessary times and intervals as dictated by regulations.

Test status is found with a visual check of one or more two-coloured diodes in the luminaire. Visual control should take place on a monthly basis. Tests and repairs should be logged with their status.

ADDRESSABLE (DALI)

DALI is an addressable, standardised control protocol designed for lighting. DALI has now also been extended to manage emergency lighting. In addressable emergency equipment the tests are programmed from a central unit. Test status are automatically logged in the central unit. Today, there are various types of software and control modules which manage DALI emergency lighting protocols. DALI Emergency lighting can be connected to other DALI controls in accordance with certain regulations. Glamox recommend DALI because it is an open standardised system and will be here today and tomorrow...

Product overview



E80-S is a surface mounted exit sign based on LED. Signs for both 20m and 30m reading distance are available. Can be supplied for manual, selftest and central controlled testing and monitoring. Using a environment friendly NiMh battery. Signs are included.



E80-R is a recessed exit sign luminaire based on LED. Signs for both 20m and 30m reading distance are available. Can be supplied for manual, selftest and central controlled testing and monitoring. Using an environment friendly NiMh battery. Signs are included.

E80-S

BODY MATERIAL AND COLOUR	White painted aluminium with component plate in Polycarbonate.
CONNECTION	Cable entry on top and knock-out in each side. 3 or 5 pole terminal block.
EMERGENCY SYSTEM	Supplied in standard (S), selftest (ST) or addressable (DALI) system for 1 or 3 hours duration.
MOUNTING	For surface ceiling mounting. Flag, wall and suspended possible by using a kit. The kit must be ordered separately.
ACCESSORIES	Wall bracket, flag bracket and suspension must be ordered separately.

Selection of items, for more items and details see our web.

Article	Article number
E80-S 10x25 DOWN LED E3/S	E80103110
E80-S 10x25 DOWN LED E3/ST	E80103210
E80-S 10x25 DOWN LED E3/DALI	E80103310
E80-S 10x25 L/R LED E3/S	E80103120
E80-S 10x25 L/R LED E3/ST	E80103220
E80-S 10x25 L/R LED E3/DALI	E80103320

E80-R

BODY MATERIAL AND COLOUR	White painted aluminium with component box in Polycarbonate.
CONNECTION	3 or 5 pole terminal block.
EMERGENCY SYSTEM	Supplied in standard (S), selftest (ST) or addressable (DALI) system for 1 or 3 hours duration.
MOUNTING	For recessed mounting. Spring-locking mounting clips are included.

Selection of items, for more items and details see our web.

Article	Article number
E80-R 10x25 DOWN LED E3/S	E80003110
E80-R 10x25 DOWN LED E3/ST	E80003210
E80-R 10x25 DOWN LED E3/DALI	E80003310
E80-R 10x25 L/R LED E3/S	E80003120
E80-R 10x25 L/R LED E3/ST	E80003220
E80-R 10x25 L/R LED E3/DALI	E80003320



E85-S is a surface mounted escape route light or anti-panic emergency light system based on LED. The escape route system, E85-S C, is especially designed for corridors and covers a 17m corridor with 1 lux on centre line. The anti-panic light, E85-S WB, has a circular wide beam light distribution that covers 8x8m with the required 0.5 lux. Both variants can be supplied for manual, selftest and central controlled testing and monitoring. Using a environment friendly NiMh battery.

E85-S WB / E85-S C

BODY MATERIAL AND COLOUR	White painted aluminium with gear tray in Polycarbonate.
CONNECTION	Cable entry on top and knock-out in each end. A 3 or 5 pole terminal block.
EMERGENCY SYSTEM	Supplied in standard (S), selftest (ST) or addressable (DALI) system for 1 or 3 hours duration.
MOUNTING	For surface ceiling mounting.

Selection of items, for more items and details see our web.

Article	Article number
E85-S WB LED E3/S	E85113100
E85-S WB LED E3/ST	E85113200
E85-S WB LED E3/DALI	E85113300
E85-S C LED E3/DALI	E85103300
E85-S C LED E3/S	E85103100
E85-S C LED E3/ST	E85103200



E85-R is a recessed escape route light or anti-panic emergency light system based on LED. The escape route system, E85-R C, is especially designed for corridors and covers a 17m corridor with 1 lux on centre line. The anti-panic light, E85-R WB, has a circular wide beam light distribution that covers 8x8m with the required 0.5 lux. Both variants can be supplied for manual, selftest and central controlled testing and monitoring. Using an environment friendly NiMh battery.

E85-R WB / E85-R C

BODY MATERIAL AND COLOUR	White painted aluminium with component box in Polycarbonate.
CONNECTION	A 3 or 5 pole terminal block.
EMERGENCY SYSTEM	Supplied in standard (S), selftest (ST) or addressable (DALI) system for 1 or 3 hours duration.
MOUNTING	For recessed mounting. Spring-locking mounting clips are included.

Selection of items, for more items and details see our web.

Article	Article number
E85-R WB LED E3/S	E85013100
E85-R WB LED E3/ST	E85013200
E85-R WB LED E3/DALI	E85013300
E85-R C LED E3/DALI	E85003300
E85-R C LED E3/S	E85003100
E85-R C LED E3/ST	E85003200
E85-R C LED EZ	E85000100

Product overview



All-in-one IP65 emergency luminaire for easy mounting. Based on 8W fluorescent light source. Including exit sign legends for maintained (M) variants. Can be supplied with manual (S) or selftest (ST) control.

GEF

BODY MATERIAL AND COLOUR	Grey component body with a clear diffuser, both in polycarbonate.
CONNECTION	Cable entry on top or through knock-outs in each end. 4 pole terminal block in centre.
EMERGENCY SYSTEM	Can be supplied as standard (S) or Selftest (ST).
LIGHT SOURCE	1xT5 8W fluorescent
MOUNTING	Easy mounting by first loosening the gear tray from the body, connect mains to the termination block before re-connecting using the quick connector.
OPTICS	With longitudinal prism-lenses in the front screen providing an excellent light distribution for escape route lighting.

Selection of items, for more items and details see our web.

Article	Article number
GEF 108 E1-3/S SINGLE M/NM	988811110
GEF 108 E3-3/S 120LM SINGLE NM	988811411



Exit sign based on 18W fluorescent lamp. Up to 60m reading distance.Can be supplied with system for manual, selftest and centrally controlled testing and monitoring.

GFI2

BODY MATERIAL AND COLOUR	White painted steel frame.
CONNECTION	Cable entry in the centre of the back-plate. When using a ceiling mounting box the cable entry is on top. 5-pole push-in terminal block.
EMERGENCY SYSTEM	Supplied in standard (S), selftest (ST) or addressable (DALI) system for 1 or 3 hours duration.
LIGHT SOURCE	1xT8 18W
MOUNTING	For wall mounting or pendant mounting with wire suspensions that must be ordered separately.

Selection of items, for more items and details see our web.

Article	Article number
GFI2 30x60 118HF-Z	991123601



Integrated solutions

Overview of product families with possibility for integrated emergency light.
For more details see our web.

INTERIOR



Activus II



C10



C20



C30



C50



C51



C60



C61



Medicus



Minerva



Modul Circle



Modul Micro



Modul Square



Reed



X-TYPE

INDUSTRY



Eminent



GIR T5



GIR T8



GPV2



i15



i20



i40



i45



MAX



MIR



MIX

DOWNLIGHT



CASA



D20 LED



D20-R



D20-S



Travel



TravelLED

ARCHITECTURAL



A10



A50



A51



Sinus



ZAPP

OUTDOOR



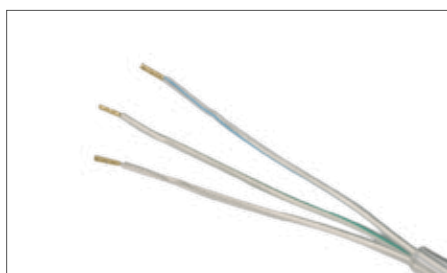
STING



Suspension system / Accessories



COMPLETE SUSPENSION SYSTEM



CABLE & WIRE
2,5m cable 3 x 0.75
1.5m wire
Art.no. standard: E80000006
Art.no. w/ceiling cup: E80000007



CABLE & WIRE
2,5m cable 5 x 0.75
1.5m wire
Art.no. standard: E80000008
Art.no. w/ceiling cup: E80000009



WALL SUSPENSION
Art.no: E80000010



FLAG SUSPENSION
Art.no: E80000015



BLOCK OUT
Art.no: 10x26: E80000017
15x26: E80000018



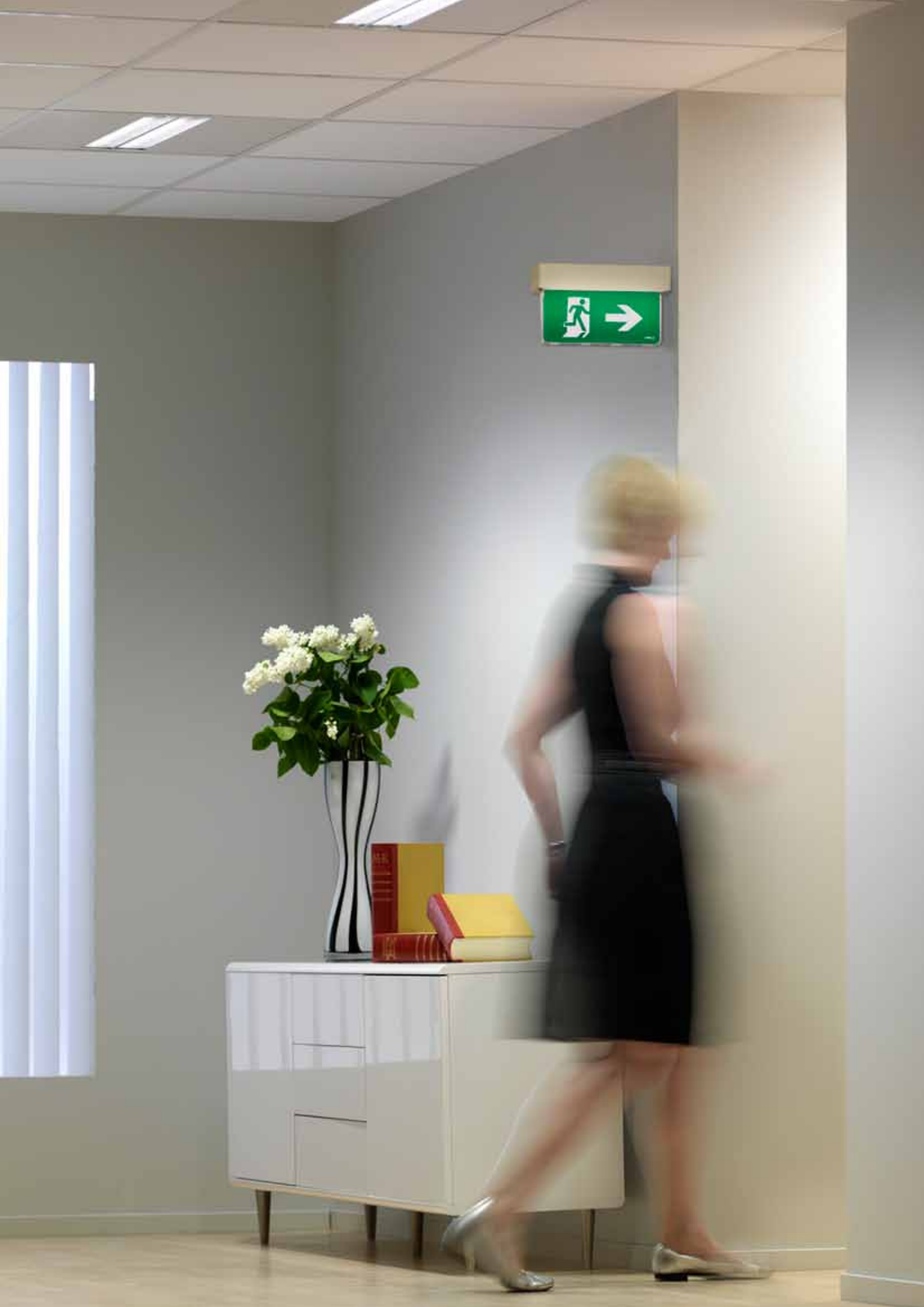
COMPLETE SET OF CUPS
Art.no: 815403244



MOUNTING BRACKET FOR T-PROFILE
Art. no: 15mm 25001005
24mm 25001006



SUPPORT PLATE
Art.no E80: E80000020
E85: E85000020





www.glamox.ie



All our products are covered by a five year warranty. More information is available from our websites.